

Recommendations of the Montgomery County Technical Group on Sequestration

February 21, 2020

Overarching goals

Goal 1: Strengthen land use policies to provide a foundation for maximizing carbon sequestration and increasing resilience

Recommendations:

- 1.1 Set a minimum overall sequestration target as a percent of county emissions.
- 1.2 Incorporate sequestration and adaptation goals into county land use priorities
- 1.3 Identify and adopt policies needed to enable or incentivize sequestration in targeted areas.
- 1.4 Strengthen protection of the Agricultural Reserve and rural low-density buffer areas which provide multiple benefits that are critical to the County's emissions, sequestration and resilience goals.
- 1.5 Establish carbon sequestration zones in water source areas, as the first barrier in the multiple barrier approach to water quality protection.

Goal 2: Accelerate the implementation of carbon sequestration strategies using nature-based climate solutions across all County programs and policies.

Recommendations:

- 2.1 Create a Climate Change Emergency Office directly under the County Executive with the mandate to integrate sequestration using natural climate solutions with all departments, programs, stakeholders and coordination with state, other counties, etc.
- 2.2 Hold orientation sessions among County departments and key stakeholders to review the outputs from the Climate Action Plan workgroups - building engagement.

2.3 Review and implement all recommendations from the 2018 Climate Mobilization Report, particularly programs and incentives highlighted for agriculture, food waste management, and composting.

2.4 Evaluate and rank high, medium, low priority existing county programs and potential new efforts proposed by the Workgroups for reducing emissions both rapidly and through sustained longer-term reduction strategies.

2.5 Thrive Montgomery 2050: Coordinate with the Montgomery County Planning Department to ensure all the high priority recommendations of the Climate Plan are included in the update of the General Plan-2050.

2.6 Execute Climate Plan recommendations and programs in cooperation with regional plans and programs.

2.7 Identify and review existing reports and programs to maximize current programs and identify the need for new programs, staff, and authorities to achieve goals.

Goal 3: Move from silos to systems change - taking a "whole systems" approach that enables innovation to increase carbon sequestration in ways that maximize co-benefits for adaptation

Recommendations

3.1 Leverage complementary funding sources for water quality protection practices that also sequester carbon.

3.2 Develop creative financing for nature-based solutions in Montgomery County.

3.3 Maximize the engagement of young people in all we do by partnering with Montgomery College, MCPS, and other educational and youth-based programs (e.g. 4H) to develop education, training, and work experience opportunities grounded in nature-based sequestration systems.

3.4 Implement workforce development, re-entry and job training programs, job opportunities and entrepreneurial training and support with a special focus on providing these opportunities to underserved communities.

3.5 Launch a far-reaching education and engagement campaign to the general public and to every sector in the county on why, how and what they can do to sequester carbon to mitigate climate change.

- 3.6 Leadership by example: Explore joining bold new platforms.
- 3.7 Launch a public education and engagement campaign throughout the county to educate about the benefits of and encourage plant-based diets
- 3.8 Analyze every sector of our food system to identify their impacts on climate change and opportunities for solutions that also increase food security.

Sector specific goals

Goal 4: Increase protections for existing trees and double the tree canopy in the urban, suburban, and other non-forest areas of Montgomery County, leading to a net increase in the amount of carbon sequestered in trees to 2030 and beyond.

Recommendations:

- 4.1 Ensure that goals for increasing trees are considered during all planning, zoning, and permitting processes.
- 4.2 Require commercial land developments to have a net zero carbon emissions or a positive sequestration value and address climate change risks such as flood mitigation, and shade for residential and commercial buildings.
- 4.5 Update and consolidate the County's many tree planting programs into an easy "one stop shopping" web portal for the public.
- 4.6 Launch an aggressive tree planting initiative for areas of high priority on both public and private land.
- 4.7 Prioritize mature trees and street tree planting and maintenance. Allow some revenues from developer fees to be used by the Transportation Department for stump removal and replanting on street right-of-ways.
- 4.8 Document and promote doubling by 2035 of "micro-forests" or urban forests on both public and private lands.
- 4.9 Provide substantial tax benefits for tree planting by private landowners, with increasing per-acre rates over time as forests grow up and increase their carbon stock, and as land values for other uses in the county increase.
- 4.10 Improve soil health around trees with compost and biochar.
Utilize all dying and infested trees and manage waste ecologically for sequestration and

compost whenever possible

4.11 “Mulch Correctly Campaign” to eliminate mulch mounds in the county infrastructure, working with landscaping companies.

Goal 5: Establish a strict policy of no further loss of the County’s natural wetlands and expand wetlands where possible.

Recommendations

5.1 Stricter protection of wetlands in the County should limit interventions that impact existing wetlands to those needed to control infestations of invasive species such as purple loosestrife and Phragmites.

5.2 County and WSSC increase efforts to protect and expand wetland and riparian ecosystems.

5.3 Vernal pools within the county are mapped, monitored and on public lands, given protection against destruction.

5.4 Assessment of feasibility of reintroduction of beavers into some areas within critical watersheds to naturally expand wetlands and manage stormwater.

5.5 Conduct an assessment of whether a goal of 10% wetlands across the county by 2050 is desirable and/or feasible.

Goal 6: Increase the County’s forest area to 37% in 2027 and 45% in 2035 (as compared to 34% in 2001-2016).

Recommendations

6.1 The County increases its proactive management of natural areas (resources and staff) to reduce degradation from invasive species, overgrazing by deer, and climate related risks such as fire and drought, as well as encroachment by land development along the periphery of forests.

6.2 Existing forests and wetlands are given a score reflecting their overall ecological condition to guide investments in assisted natural regeneration, restoration and management.

6.3 Reforest, through both tree-planting (where necessary) and natural regeneration (where possible), large blocks of forest on County-owned land using native tree species.

6.4 Develop broader landscape strategies by working with other public land-managing agencies in the county and in adjacent counties to coordinate ecosystem restoration plans on watershed and county-wide levels, as well as plans to share the costs involved.

6.5 Revise forest policies to incorporate explicit sequestration objectives such as stricter prohibitions against cutting of mature trees, forests, and/or increased penalties for illegal cutting of natural vegetation.

6.6 Hold field days, site visits, seminars and other events at sites that have successfully been reforested in Montgomery County.

Goal 7: Engage and support farmers, gardeners and their organizations in an aggressive transition to regenerative agricultural practices.

Recommendations:

7.1 Identify, incentivize, and promote the most promising practices in regenerative agriculture for sequestering carbon and for reducing or eliminating greenhouse gas emissions – set specific targets after getting baseline soil carbon data, i.e. quadruple County acres in regenerative agriculture / increase agricultural sequestration by 15% by 2027.

7.2 Prioritize education of farmers by technical assistance providers to assist producers in implementing regenerative agricultural practices, including composting, silviculture, and diversified farming systems.

7.3 Build multi-stakeholder partnerships, i.e. with the Million Acre Challenge, Chesapeake Bay Funders, to accelerate progress and learning in regenerative agriculture.

7.4 Develop market opportunities for products grown and produced using regenerative agricultural practices.

7.5 Launch a public education and engagement campaign throughout the county to increase the consumption and production of food using regenerative agricultural practices.

Goal 8: Help restore the earth's carbon, water and energy cycles as a key climate mitigation and adaptation solution by restoring Montgomery County's soil fertility, microbial activity, and moisture-holding capacity.

Recommendations:

8.1 Establish and implement programs, policies, incentives and investment of resources (i.e. farmer technical assistance, MC procurement contracts, transition financing, etc.) to build healthy soils in the Agricultural Reserve and throughout the entire county.

8.2 Establish a County Carbon Sequestration Task Force or Advisory Committee including local scientists, land stewards, and sequestration experts to advise and monitor a county healthy soils program.

8.3 Launch a healthy soils campaign to educate and engage the public, local officials, and business owners in Montgomery County to build and maintain healthy soils in residential, school, commercial and community landscapes. Provide incentives and education about how to convert lawns and turf into a variety of other landscapes that sequester carbon more effectively and provide multiple other co-benefits for pollinators, biodiversity, storm water management, water quality, food security, and resilience.

8.4 Practices for ecosystem rehabilitation to restore soil health and increase ecosystem resilience.

8.5 Establish incentives for increasing healthy soil to sequester carbon.

8.6 Launch a campaign to convert lawns into a variety of other landscapes that sequester carbon more effectively and provide multiple other co-benefits to our food system, our health, our environment, stormwater management and strengthening climate resilience.

8.7 Create and adopt legislation that establishes support for a county-wide healthy soils program.

8.8 The state Nutrient Management law needs to be reviewed to address the use of compost for lawn care.

Goal 9: Close the loop by establishing a county-wide food and other organic waste composting system for government, commercial and residential buildings to reach a minimum of 70% diversion, and increase the use of compost for improving soil health and increasing carbon sequestration.

Recommendations

9.1 Establish a County-wide composting system, ensuring a supply of quality organic soil amendment/ compost to farms and gardens.

9.2 Expand County backyard composting program by allowing food scraps to be composted, providing rodent proof compost containers, and providing compost training based upon best practices and providing demonstration composting education hub sites. Include training on how to use compost and benefits such as building healthy soil and carbon sequestration.

9.3 Establish County Community Composting Hubs that utilize rodent proof containers, best practices throughout the county.

9.4 Expand On-Farm Composting and Compost Use.

9.5 Institute on-site composting programs throughout the county.

9.6 Institute composting program for commercial businesses.

9.7 Institute composting program for multi-family residents.

9.8 Institute composting program for single-family residents.

9.9 Expand composting, compost use and education in schools.

9.10 Institute food scrap composting program at all farmers markets.

9.11 Expand composting capacity within the county.

9.12 Expand use of compost in the county and support and prioritize the use of "MoCo-locally made compost."

9.13 Institute incentive and dis-incentive programs that promote composting and compost use.

9.14 Establish the carbon emissions sequestration values related to the recommendations provided in the Zero Waste Task Force Report.

- 9.15 Expand the collection and redistribution of food that can be consumed.
- 9.16 Update the county website to include more information and resources on how to compost, how to use compost, and benefits of composting.
- 9.17 Support state level organics diversion, composting and compost use recommendations and legislation.
- 9.18 Modify the County's waste management plan. Eliminate incineration and put residuals in a safe and remote landfill, accessible by clean-energy rail haul. Give oversight of solid waste management to DEP (not a private entity with its own interests).
- 9.19 Ensure that the Solid Waste Advisory Committee is informed about all composting related recommendations and solicit support.